UNITED STATES PATENT AND TRADEMARK OFFICE

APPLICATION NO.	FILING DATE	FIRST NAMED INVENTOR	ATTORNEY DOCKET NO.	CONFIRMATION NO.
09/910,445	07/20/2001	Charles Evert Prael	214.1001.01	2751

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EXAMINER	
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ART UNIT	PAPER NUMBER
2127	

DATE MAILED: 11/15/2004

Please find below and/or attached an Office communication concerning this application or proceeding.

	Application No.	Applicant(s)
Office Action Summary	09/910,445	PRAEL ET AL.
	Examiner	**Art Unit**	
	Lilian Vo	2127	

-- The MAILING DATE of this communication appears on the cover sheet with the correspondence address --

Period for Reply

A SHORTENED STATUTORY PERIOD FOR REPLY IS SET TO EXPIRE _3_ MONTH(S) FROM THE MAILING DATE OF THIS COMMUNICATION.

- Extensions of time may be available under the provisions of 37 CFR 1.136(a). In no event, however, may a reply be timely filed after SIX (6) MONTHS from the mailing date of this communication.
- If the period for reply specified above is less than thirty (30) days, a reply within the statutory minimum of thirty (30) days will be considered timely.
- If NO period for reply is specified above, the maximum statutory period will apply and will expire SIX (6) MONTHS from the mailing date of this communication.
- Failure to reply within the set or extended period for reply will, by statute, cause the application to become ABANDONED (35 U.S.C. § 133). Any reply received by the Office later than three months after the mailing date of this communication, even if timely filed, may reduce any earned patent term adjustment. See 37 CFR 1.704(b).

Status

1) ☒ Responsive to communication(s) filed on _20 July 2001_.

2a) ☐ This action is **FINAL**. 2b) ☒ This action is non-final.

3) ☐ Since this application is in condition for allowance except for formal matters, prosecution as to the merits is closed in accordance with the practice under *Ex parte Quayle*, 1935 C.D. 11, 453 O.G. 213.

Disposition of Claims

4) ☒ Claim(s) _1 - 28_ is/are pending in the application.

    4a) Of the above claim(s) _____ is/are withdrawn from consideration.

5) ☐ Claim(s) _____ is/are allowed.

6) ☒ Claim(s) _1 - 28_ is/are rejected.

7) ☐ Claim(s) _____ is/are objected to.

8) ☐ Claim(s) _____ are subject to restriction and/or election requirement.

Application Papers

9) ☐ The specification is objected to by the Examiner.

10) ☐ The drawing(s) filed on _____ is/are: a)☐ accepted or b)☐ objected to by the Examiner.

    Applicant may not request that any objection to the drawing(s) be held in abeyance. See 37 CFR 1.85(a).

    Replacement drawing sheet(s) including the correction is required if the drawing(s) is objected to. See 37 CFR 1.121(d).

11) ☐ The oath or declaration is objected to by the Examiner. Note the attached Office Action or form PTO-152.

Priority under 35 U.S.C. § 119

12) ☐ Acknowledgment is made of a claim for foreign priority under 35 U.S.C. § 119(a)-(d) or (f).

    a)☐ All b)☐ Some * c)☐ None of:

      1.☐ Certified copies of the priority documents have been received.

      2.☐ Certified copies of the priority documents have been received in Application No. _____.

      3.☐ Copies of the certified copies of the priority documents have been received in this National Stage application from the International Bureau (PCT Rule 17.2(a)).

    * See the attached detailed Office action for a list of the certified copies not received.

Attachment(s)

1) ☒ Notice of References Cited (PTO-892)

2) ☐ Notice of Draftsperson's Patent Drawing Review (PTO-948)

3) ☐ Information Disclosure Statement(s) (PTO-1449 or PTO/SB/08)
    Paper No(s)/Mail Date _____.

4) ☐ Interview Summary (PTO-413)
    Paper No(s)/Mail Date. _____ .

5) ☐ Notice of Informal Patent Application (PTO-152)

6) ☐ Other: _____.

DETAILED ACTION

1.   Claims 1 – 28 are pending.

Claim Rejections - 35 USC § 112

2.   The following is a quotation of the second paragraph of 35 U.S.C. 112:

> The specification shall conclude with one or more claims particularly pointing out and distinctly claiming the subject matter which the applicant regards as his invention.

3.   Claims 7 and 20 - 27 are rejected under 35 U.S.C. 112, second paragraph, as being indefinite for failing to particularly point out and distinctly claim the subject matter which applicant regards as the invention.

Claim 7 recites the limitation "responsive to at least one attribute of said <u>at least job</u> to be processed" in page 21, lines 2 – 3. This is considered unclear and incomplete. The examiner believes there a typographical error.

Claim 20 recites the limitation "a pool of processing resources" on page 25, line 8. Is this the same pool of processing resources that the applicant referring to in lines 3 – 4? A clarification is required to overcome this type of rejection.

Claim 25 recites the limitation "said cluster of programming resources" in page 27, line 13. There is insufficient antecedent basis for this limitation in the claim.

Claims 26 - 27 recite the limitation "a billing element" in pages 27 – 28, line 1. There is

insufficient antecedent basis for this limitation in the claim.

Claim Rejections - 35 USC § 102

4.   The following is a quotation of the appropriate paragraphs of 35 U.S.C. 102 that form the

basis for the rejections under this section made in this Office action:

> A person shall be entitled to a patent unless –
>
> (e) the invention was described in (1) an application for patent, published under section 122(b), by another filed
> in the United States before the invention by the applicant for patent or (2) a patent granted on an application for
> patent by another filed in the United States before the invention by the applicant for patent, except that an
> international application filed under the treaty defined in section 351(a) shall have the effects for purposes of this
> subsection of an application filed in the United States only if the international application designated the United
> States and was published under Article 21(2) of such treaty in the English language.

5.   Claim 19 is rejected under 35 U.S.C. 102(e) as being anticipated by Wood et al (US Pat.

Application Publication 2002/0194248, hereinafter Wood).

6.   Regarding **claim 19**, Wood discloses a processor readable medium which encoded with a

data structure stored to a set of processing nodes and capable upon reboot of the set of processing

nodes of configuring the set of processing nodes into a processing collective (page, paragraphs

10 – 11).

Claim Rejections - 35 USC § 103

7.   The following is a quotation of 35 U.S.C. 103(a) which forms the basis for all

obviousness rejections set forth in this Office action:

> (a) A patent may not be obtained though the invention is not identically disclosed or described as set forth in
> section 102 of this title, if the differences between the subject matter sought to be patented and the prior art are
> such that the subject matter as a whole would have been obvious at the time the invention was made to a person

having ordinary skill in the art to which said subject matter pertains. Patentability shall not be negatived by the
manner in which the invention was made.

8.   Claims 1 – 3, 7, 10 – 12, 16, 20 – 22, 25 and 28 are rejected under 35 U.S.C. 103(a) as

being unpatentable over Wood et al. (US Pat. Application Publication 2002/0194248, hereinafter

Wood).

9.   Regarding **claim 1**, Wood discloses a method of doing business including the steps of:

receiving at least one job to be processed from at least one customer (page 1, paragraphs

6 and 7, page 4, paragraph 38);

estimating a time for completion of processing for said at least one job to be processed

(page 4, paragraphs 35 - 36: expected termination time of a particular running job. Page 6,

paragraphs 46);

placing each of said at least one job to be processed in a queue of jobs to be processed

(page 1, paragraphs 4 and 7);

sorting said queue of jobs to be processed (page 1, paragraphs 7);

configuring dynamically the size of at least one cluster of processing resource from a

pool of processing resources responsive to at least one attribute of said job to be processed

(abstract, page 1, paragraph 29: a job may run on more than one node at a time. When the job

runs, the number of nodes it requires is allocated to the job which is then available for the job's

usage. Paragraph 30: Nodes with sufficient capacity for the requirements of a job can be

allocated to the job);

processing said at least one job to be processed from said queue of jobs to be processed

by assigning said at least one job to be processed to said at least one cluster of processing

resources (page 1, paragraph 7).

Wood did not clearly disclose the step of making a result of the processing of the job to

be processed available to the customer. However, the concept of sending back to customer the

result of the processed job is considered well know in the art and would also have been obvious

for one of an ordinary skill in the art, at the time the invention was made to incorporate to

Wood's system to provide the result of the processing to the customer to fulfill the transaction

request.

10.   Regarding **claim 2**, Wood discloses the receiving further includes at least one attribute

specific to the job to be processed including at least one of the following attributes: 1) priority of

processing, 2) type of processing, and 3) a tolerance time (page 1, paragraph 7).

11.   Regarding **claim 3**, Wood discloses jobs to be processed include consideration of the

request for priority of processing (page 1, paragraph 7).

12.   Regarding **claim 7**, Wood discloses the step of configuring dynamically a pool of

processing resources into at least one cluster of processing resources responsive to at least one

attribute of said at least job to be processed further includes the steps of:

saving said cluster of processing resources from said pool of processing resources as they

become available such that they are earmarked for creating a specific cluster to be used for

processing said at least one job to be processed (page 1, paragraph 8: marking for dedication to

the job as many conforming free nodes in the earliest available time range as required by the job.

Page 6, paragraph 47);

saving a configuration file on said cluster of processing resources (page 3, paragraph 29:

a job may run on more than one node at a time. When the job runs, the number of nodes it

requires are allocated to the job which are then available for the job's usage); and

rebooting said cluster of processing resources to configure dynamically said cluster of

processing resources for processing of said at least one job to be processed (page 3, paragraph

29: When the job runs, the number of nodes it requires are allocated to the job which are then

available for the job's usage. Paragraph 30: Nodes with sufficient capacity for the requirements

of a job can be allocated to the job).

13.   **Claims 10 – 12 and 16** are rejected on the same ground as stated in claims 1 – 3 and 7

above.

14.   Regarding **claim 20**, Wood discloses a system including:

a request receiver element configured to receive at least one job to be processed from at

least one customer, said request receiver element in communication with a pool of processing

resources (page 1, paragraph 7: receiving a plurality of jobs to be scheduled for executing on the

sub-pool nodes set);

a queue of jobs to be processed and disposed to being sorted according to a priority

assigned to each of said at least one job to be processed, said queue of jobs to be processed being

in communication with said pool of processing resources (page 1, paragraph 7: ordering the

receiving jobs by job priority and schedule for executing on the sub-pool nodes set); and

a pool of processing resources configured to run at least one job to be processed, said

pool of processing resources and disposed to being dynamically divided into clusters of

processing resources (abstract, page 1, paragraph 29: a job may run on more than one node at a

time. When the job runs, the number of nodes it requires is allocated to the job which is then

available for the job's usage. Paragraph 30: Nodes with sufficient capacity for the requirements

of a job can be allocated to the job).

Wood however did not clearly disclose the step of running the clusters in parallel.

Instead, Wood discloses the step of scheduling jobs on parallel computer systems (page 1,

paragraph 4). It would have been obvious for one ordinary skill in the art, at the time the

invention was made to implement Wood's system with the feature of running clusters in parallel

to fully utilize all the system resource in an efficient manner.

15.   **Claims 21 – 22** are rejected on the same ground as stated in claims 2 – 3 above.

16.   Regarding **claim 25**, Wood disclose the pool of processing resources are disposed to

being dynamically divided into clusters of processing resources is responsive to at least one

attribute of the job to be processed (abstract, page 1, paragraph 29: a job may run on more than

one node at a time. When the job runs, the number of nodes it requires is allocated to the job

which is then available for the job's usage. Paragraph 30: Nodes with sufficient capacity for the

requirements of a job can be allocated to the job) and further include:

a procuring element disposed to collect processing resources from said pool of processing resources as they become available such that they are earmarked for creating a specific cluster to be used for processing said at least one job to be processed (page 1, paragraph 8: marking for dedication to the job as many conforming free nodes in the earliest available time range as required by the job. Page 6, paragraph 47);

an initializing element disposed to save a configuration file on said cluster of processing resources (page 3, paragraph 29: a job may run on more than one node at a time. When the job runs, the number of nodes it requires is allocated to the job which is then available for the job's usage);

a rebooting element disposed to soft reboot said cluster of processing resources such that said cluster of processing resources is dynamically created (page 3, paragraph 29: When the job runs, the number of nodes it requires are allocated to the job which are then available for the job's usage. Paragraph 30: Nodes with sufficient capacity for the requirements of a job can be allocated to the job);

an executing element configured to run said at least one job to be processed on said cluster of programming resources (page 1, paragraph 7: executing the jobs).

Wood did not clearly disclose the step of making a result of the processing of the job to be processed available to the customer. However, the concept of sending back to customer the result of the processed job is considered well know in the art and would also have been obvious for one of an ordinary skill in the art, at the time the invention was made to incorporate to Wood's system to provide the result of the processing to the customer to fulfill the transaction request.

17.   Regarding **claim 28**, Woods discloses a memory storing information including

instructions executable by a processor to perform a method for dynamically configuring a pool of

processing resources into clusters of processing resources which may be nm in parallel (page,

paragraphs 10 – 11), said instructions including

     determining a number of said processing resources to be clustered (page 6, paragraph 47);

     identifying said processing resources to be clustered as they become available (page 1,

paragraph 8: marking for dedication to the job as many conforming free nodes in the earliest

available time range as required by the job. Page 6, paragraph 47);

     forcing said processing resources, as identified, to initialize forming a cluster (page 3,

paragraph 29: a job may run on more than one node at a time. When the job runs, the number of

nodes it requires is allocated to the job which is then available for the job's usage);

     processing a job to completion (abstract, page 1, paragraph 7 – 8: executing the jobs).

     Wood did not clearly disclose the step of making a result of the processing of the job to

be processed available to the customer. However, the concept of sending back to customer the

result of the processed job is considered well know in the art and would also have been obvious

for one of an ordinary skill in the art, at the time the invention was made to incorporate to

Wood's system to provide the result of the processing to the customer to fulfill the transaction

request.

18.   Claim 4 – 6, 13 – 15 and 23 - 24 are rejected under 35 U.S.C. 103(a) as being

unpatentable over Wood et al. (US Pat. Application Publication 2002/0194248, hereinafter

Wood) as applied to claim 1 above and in view of Bhatti et al (EP 1 172 738 A2, hereinafter

Bhatti).

19.   Regarding **claim 4**, Wood did not clearly disclose the tolerance time includes a time for

completion acceptable to the customer that is later in time than the estimated time. Nevertheless,

Bhatti discloses the tolerance time includes a time for completion acceptable to the customer that

is later than the estimated time (abstract, col. 9, lines 45 – 49: allowable processing deadline

specifies the allowable time period within which the user request must be serviced). It would

have been obvious for one of an ordinary skill in the art, at the time the invention was made, to

combine Bhatti's teaching with Wood so that quality of service can be achieved by providing

service to customer within the acceptable time frame.

20.   Regarding **claim 5**, Wood discloses the step of ordering jobs by job priority but he did

not clearly disclose the considering tolerance time attribute of the jobs. Nevertheless, Bhatti

teaches that each user requests have an allowable processing deadline based on the

corresponding user tolerance threshold of the use requests (abstract and col. 9, lines 45 – 49). It

would have been obvious for one of an ordinary skill in the art, at the time the invention was

made, to combine Bhatti's teaching with Wood to consider the tolerance time of the request so

that quality of service can be achieved by providing service to customer within the acceptable

time frame.

21.   Regarding **claim 6**, Wood did not clearly disclose the step of confirming the time for

completion of processing with the customer. Nevertheless, Bhatti discloses each user requests

have an allowable processing deadline based on the corresponding user tolerance threshold of the

use requests and that the processing deadline specifies the time period within which the

particular user request must be serviced (abstract and col. 9, lines 45 – 49). Furthermore, Bhatti

discloses that the system has knowledge of human behavior and expectation which can act

accordingly to users' subjective expectation of the performance (col. 2, lines 48 – 54). It would

have been obvious for one of an ordinary skill in the art, at the time the invention was made, to

recognize that Bhatti's system comprises the step of confirming the request processing

completion time with the customer by providing the service accordingly to the users' subjective

expectation. It would also have been obvious for an ordinary skill to combine Bhatti's teaching

with Wood so that quality of service can be achieved by providing service to customers

according to their expectation.

22.   **Claims 13 – 15 and 23 - 24** are rejected on the same ground as stated in claims 4 - 6

above.

23.   Claim 8 – 9, 17 – 18 and 26 – 27 are rejected under 35 U.S.C. 103(a) as being

unpatentable over Wood et al. (US Pat. Application Publication 2002/0194248, hereinafter

Wood) as applied to claims 1, 10 and 20 above and in view of Abrams (US Pat. Application

Publication 2004/0193517).

24.   Regarding **claim 8**, Wood did not clearly disclose the result of the job includes charging the fee. Nevertheless, the concept of charging a fee for performing a job is considered well known in the art and additionally discloses by Abrams in which the amount of time spent on a particular job is charged to the customer (page 1, paragraph 4). It would have been obvious for one ordinary skill in the art, at the time the invention was made to incorporate this concept to Wood to charge the customer for executing the jobs and/or providing the service.

25.   Regarding **claim 9**, Wood did not clearly disclose the additional limitation as claimed. Nevertheless, the concept of charging a fee based on the time perform a job is considered well known in the art and additionally discloses by Abrams in which the amount of time spent on a particular job is charged to the customer (page 1, paragraph 4). It would have been obvious for one ordinary skill in the art, at the time the invention was made to incorporate this concept to Wood to charge the customer for executing the jobs and/or providing the service.

26.   **Claims 17 – 18 and 26 – 27** are rejected on the same ground as stated in claims 8 – 9 above.

Conclusion

27.   Any inquiry concerning this communication or earlier communications from the examiner should be directed to Lilian Vo whose telephone number is 571-272-3774. The examiner can normally be reached on Monday - Thursday, 7:30am - 5pm.

If attempts to reach the examiner by telephone are unsuccessful, the examiner's supervisor, Meng-Ai An can be reached on 571-272-3756. The fax phone number for the organization where this application or proceeding is assigned is 703-872-9306.

Information regarding the status of an application may be obtained from the Patent Application Information Retrieval (PAIR) system. Status information for published applications may be obtained from either Private PAIR or Public PAIR. Status information for unpublished applications is available through Private PAIR only. For more information about the PAIR system, see http://pair-direct.uspto.gov. Should you have questions on access to the Private PAIR system, contact the Electronic Business Center (EBC) at 866-217-9197 (toll-free).

Lilian Vo
Examiner
Art Unit 2127

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November 5, 2004

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